## CLAIMS

What is claimed is:

1. An integrated and self contained diesel electric thruster system integral with a dynamic positioning control system for dynamic positioning of any waterborne vessel having a hull with at least two sides and a deck connecting the sides, comprising:

    a. at least two azimuthing thrusters, each removably mounted to the vessel, comprising:

        i. a skid removably secured to the deck;

        ii. an upper thruster housing, removably connected to the skid, containing steering gear with electric slewing drive and electrical steering angle feedback sensors and a multi-conductor slip ring assembly;

        iii. a stem moveably connected with a connector to the skid;

        iv. a strut connected to the stem;

        v. an electric pod connected to the strut;

        vi. wherein the pod comprises a housing an electric motor contained within the housing; a drive shaft connected to the electric motor on one end, at least one propeller with nozzle connected to the drive shaft; and an electric power cable connecting on one end to the multi-conductor slip ring assembly and on the other end to the electric motor;

    b. at least two self-contained diesel electric power units removably secured to the deck, one for each thruster, comprising:

        i. a housing comprising a diesel engine with a fuel day tank, a cooling system for the engine, an exhaust system for the engine, an alternator for the engine, electrical control system, an electric starter, a battery, and the diesel engine

is connected to an electrical generator with a frequency converter drive;

ii. an electric power cable and an electrical control cable, each having a first and second end, wherein each the first ends are secured to the diesel electric power unit and the other ends are secured to the thruster skid;

c. at least one dynamic positioning computer connected to each of the self contained diesel electric power units;

d. at least one motion reference sensor connected to the dynamic positioning computer to correct reference position signals for motion of the vessel; and

e. at least one heading sensor and at least one sensor selected from group consisting of position reference sensors connected to the dynamic positioning computer; environmental sensors connected to the dynamic positioning computer; and combinations thereof.

2. The system of claim 1, wherein one or more hydraulic cylinders at the connector are used to tilt the stem upwards to a stowed position of the thruster, whereby the thruster is completely out of the water.

3. The system of claim 1, wherein the slewing drive for azimuthing is a hydraulic slewing drive.

4. The system of claim 1, wherein the position reference sensors are selected from the group consisting of global positioning system (GPS) sensors; hydro-acoustic sensors; fan beam laser sensors; Artimis system signal sensors; vertical taut wire system sensors, horizontal taut wire system sensors; differential and absolute reference positioning system (DARPS) sensors.

5. The system of claim 1, wherein the environmental sensors are selected from the group consisting of wind sensors, current sensor and combinations thereof.

6. The system of claim 1, wherein the dynamic positioning computer further comprises at

least one uninterruptible power source connected to the computer.

7. The system of claim 1, wherein the diesel engine ranges from 500 horsepower to 3000 horsepower.

8. The system of claim 1, wherein the motor is a variable speed AC electric motor.

9. The system of claim 1, wherein the motor is a variable speed DC electric motor and the drive is a silicon-controlled rectifier (SCR) drive.

10. The system of claim 1, wherein the motor is reversible.

11. The system of claim 1, wherein the connector is a hinge.

12. The system of claim 1, wherein the stem is bolted to the skid.

13. The system of claim 1, wherein the stem further comprises at least one hydraulic cylinder connected to the stem to raise or lower the stem.

14. The system of claim 1, wherein the thruster is mounted to the deck of the vessel.

15. The system of claim 1, wherein the thruster is mounted to the side of the hull above the water line of the vessel.

16. The system of claim 1, comprising at least two thrusters.

17. A waterborne vessel comprising at least two thrusters as defined in claim 1.

18. An integrated and self contained gas turbine electric thruster system integral with a dynamic positioning control system for dynamic positioning of any waterborne vessel having a hull with at least two sides and a deck connecting the sides, comprising:

a. at least two azimuthing thrusters, each removably mounted to the vessel, comprising:

i. a skid removably secured to the deck;

ii. an upper thruster housing, removably connected to the skid, containing steering gear with electric slewing drive and electrical steering angle feedback sensors and a multi-conductor slip ring assembly;

iii. a stem moveably connected with a connector to the skid;

iv. a strut connected to the stem;

v. an electric pod connected to the strut;

vi. wherein the pod comprises a housing an electric motor contained within the housing; a drive shaft connected to the electric motor on one end, at least one propeller with nozzle connected to the drive shaft; and an electric power cable connecting on one end to the multi-conductor slip ring assembly and on the other end to the electric motor;

b. at least two self-contained gas turbine electric power units removably secured to the deck, one for each thruster, comprising:

i. a housing comprising a gas turbine with a fuel day tank, a cooling system for the gas turbine, an exhaust system for the gas turbine, an alternator for the gas turbine, electrical control system, an electric starter, a battery, and the gas turbine is connected to an electrical generator with a frequency converter drive;

ii. an electric power cable and an electrical control cable, each having a first and second end, wherein each the first ends are secured to the gas turbine electric power unit and the other ends are secured to the thruster skid;

c. at least one dynamic positioning computer connected to each of the self contained gas turbine electric power units;

d. at least one motion reference sensor connected to the dynamic positioning computer to correct reference position signals for motion of the vessel; and

e. at least one heading sensor and at least one sensor selected from each group consisting of position reference sensors connected to the dynamic positioning computer; environmental sensors connected to the dynamic positioning computer; and combinations thereof.